

**CLAIMS**

We claim:

1. A method for an object-exchange client to discover an accessible object-exchange resource on a network incorporating routable communications protocols, the  
5 method comprising:
  - listening on a multicast channel provided according to a routable network communications protocol for an object-exchange resource identification advertisement;
  - receiving at least one advertisement on the multicast channel identifying  
10 an accessible object-exchange resource;
  - storing information from the received advertisement; and
  - using the stored information to access the identified object-exchange resource.
- 15 2. The method of claim 1 wherein the multicast channel is carried on a well-known port provided according to the routable network communications protocol.
3. The method of claim 1 wherein the received object-exchange resource identification advertisement is carried according to a protocol in the set consisting  
20 of: the Simple Service Discovery Protocol and the Service Location Protocol.
4. The method of claim 1 wherein the received object-exchange resource identification advertisement contains information expressed according to an extensible markup language definition.
- 25 5. The method of claim 1 wherein the identified accessible object-exchange resource is in the group: an object-exchange server, an object-exchange service, and a second object-exchange client.

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6. The method of claim 5 wherein the identified accessible object-exchange resource is an object-exchange server and the received object-exchange resource identification advertisement lists object-exchange services provided by the object-exchange server.
7. The method of claim 5 wherein the identified accessible object-exchange resource is an object-exchange service in the group: inbox service, file browser, and synchronization service.
8. The method of claim 1 further comprising:  
applying a filter to the at least one received advertisement and discarding advertisements that do not satisfy criteria of the filter.
9. The method of claim 8 wherein at least one criterion of the filter is in the group: Globally Unique Identifier, geographical location, network hop count from the identified accessible object-exchange resource to the object-exchange client, address mask, and domain name.
10. The method of claim 1 further comprising:  
making a list of the identified accessible object-exchange resources.
11. The method of claim 1 further comprising:  
formulating a discovery request asking object-exchange resources to identify themselves; and  
sending the discovery request over the multicast channel.
12. The method of claim 11 wherein the discovery request specifies a property desired in responsive object-exchange resources.
13. The method of claim 12 wherein the desired property is expressed according to an extensible markup language definition.

14. The method of claim 11 wherein the scope of dispersal of the discovery request is expanded by bridging the discovery request from one network to another network.
- 5 15. The method of claim 11 wherein the scope of dispersal of the discovery request is limited by means of a network hop count.
16. A computer-readable medium containing instructions for performing a method for an object-exchange client to discover an accessible object-exchange resource on a network incorporating routable communications protocols, the method comprising:
- 10 listening on a multicast channel provided according to a routable network communications protocol for an object-exchange resource identification advertisement;
- 15 receiving at least one advertisement on the multicast channel identifying an accessible object-exchange resource;
- storing information from the received advertisement; and
- using the stored information to access the identified object-exchange resource.
- 20 17. A method for an object-exchange resource to make its accessibility known, the method comprising:
- formulating an object-exchange resource identification advertisement; and
- 25 sending the advertisement on a multicast channel provided according to a routable network communications protocol.
18. The method of claim 17 wherein the multicast channel is carried on a well-known port provided according to the routable network communications protocol.

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19. The method of claim 17 wherein the object-exchange resource identification advertisement is carried according to a protocol in the set: the Simple Service Discovery Protocol, the Service Location Protocol.
- 5 20. The method of claim 17 wherein the object-exchange resource identification advertisement contains information expressed according to an extensible markup language definition.
- 10 21. The method of claim 17 wherein the object-exchange resource is in the group: an object-exchange server, an object-exchange service, an object-exchange client.
- 15 22. The method of claim 21 wherein the object-exchange resource is an object-exchange server and the object-exchange resource identification advertisement lists object-exchange services provided by the object-exchange server.
- 20 23. The method of claim 21 wherein the object-exchange resource is an object-exchange service in the group: inbox service, file browser, and synchronization service.
- 20 24. The method of claim 17 further comprising:  
listening on the multicast channel for a discovery request asking object-exchange resources to identify themselves; and  
sending an object-exchange resource identification advertisement in response to a received discovery request.
- 25 25. A computer-readable medium containing instructions for performing a method for an object-exchange resource to make its accessibility known, the method comprising:  
formulating an object-exchange resource identification advertisement; and  
30 sending the advertisement on a multicast channel provided according to a routable network communications protocol.